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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/636,099

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John W. Marshall

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EXAMINER

CHANG, JUNGWON

ART UNIT

PAPER NUMBER

2454

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/636,099	<b>Applicant(s)</b> MARSHALL ET AL.	
	<b>Examiner</b> JUNGWON CHANG	<b>Art Unit</b> 2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-16 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-16 and 21-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. This Action is in response to amendment filed on 11/17/08. Claims 1-8 and 17-20 have been canceled. Claims 9-16 and 21-32 are presented for examination.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 9-16 and 21-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 9-16 and 21-32 recite "one or more queues; a queue manager; and auxiliary queue logic" is software, per se, based on the specification, page 15, lines 15-18, which states in part:

It should be noted that the inventive technique described herein may be implemented in whole or in part in software. For example, the functions performed by the **scheduler, the calendar queue, traffic manager, and auxiliary queue logic may be implemented as software functions or subroutines...**

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9-16 and 21-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deforche (US 2004/0258072), in view of Acharya (US 7,110,359), Homberg et al, (US 6,661,802), hereinafter Homberg.

6. As to claims 9, 21 and 29, Deforche discloses the invention as claimed, including an apparatus for improving utilization of a data link coupled to a network comprising:

one or more queues configured to hold data (page 4, 0064, "packet is enqueued");

a queue manager coupled to the queues and configured to dequeue the data from the queues and transfer the data onto the data link (fig. 2; page 4, 0065);

auxiliary queue logic coupled to the queue manager and configured to generate scores for one or more of the queues, the auxiliary queue logic further configured a scorecard of the generated scores and notify the queue manager of a queue associated with the highest score in the scorecard to cause the queue manager to dequeue data from the queue when the link becomes idle (page 2, 0026; page 3, 0041; page 4, 0067).

7. Although Deforche discloses generating scores, Deforche does not specifically disclose maintaining a scorecard of the generated scores. Acharya discloses maintaining a scorecard of the generated scores (col. 6, line 49 – col. 7, line 4). It would have been obvious to one of ordinary skill in the art at the time of the invention was

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made to combine the teaching of Deforche and Acharya because Acharya's maintaining a scorecard would transmit data from the queue based on the stored weights, as taught by Acharya (col. 6, lines 61-65).

Although associating one or more queues with an excess rate component is well known in the art to specify bandwidth requirements, Deforche does not specifically disclose one or more queues associated with an excess rate component; and the scores to represent ratings of eligibility to transfer data in accordance with the excess rate component. Homberg discloses one or more queues are associated with an excess rate component (col. 1, lines 44-61; col. 2, lines 10-31) and the scores to represent ratings of eligibility to transfer data in accordance with the excess rate component (48, fig. 1; col. 5, lines 40-65; col. 9, lines 7-18). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Deforche and Homberg because Homberg's teaching would provide improved quality of service by managing congestion in a network, as taught by Homberg, col. 1, line 44 - col. 2, line 7.

8. As to claim 10, Deforche discloses the apparatus as defined in claim 9 comprising:

calendar queue logic coupled to the auxiliary queue logic and configured to notify the auxiliary queue logic when the data link becomes idle (page 2, 0026; page 3, 0041; page 4, 0067).

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9. As to claim 11, Deforche discloses the apparatus as defined in claim 9 comprising:

a scheduler coupled to the auxiliary queue logic and configured to maintain attribute information associated with the queues (page 4, 0067, "scheduler").

10. As to claims 12-14, 22-24, 30 and 31, Deforche discloses the apparatus as defined in claim 11 wherein the auxiliary queue logic is configured to acquire the attribute information associated with the queues from the scheduler and use the attribute information to generate scores for the queues (page 2, 0026; page 3, 0041; page 4, 0067).

11. As to claims 15, 16, 25-28 and 32, they are rejected for the same reasons set forth in claim 9 above. In addition, Deforche discloses a queue identifier (QID) field configured to hold a QID associated with a queue (figs. 5-8).

12. Applicant's arguments with respect to claims 9-16 and 21-32 have been considered but are moot in view of the new ground(s) of rejection.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

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Gai et al, US 6,904,014, Kerr et al, US 7,292,578, Wolff et al, US 6,075,771 disclose scheduler assigns committed information bit rate and excess information bit rate values per queues, along with a shaped maximum bit rate per media link of the station.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUNGWON CHANG whose telephone number is (571)272-3960. The examiner can normally be reached on M-F 6:30 - 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUNGWON CHANG/  
Primary Examiner, Art Unit 2454  
January 22, 2009